I claim:

1. An electromechanical switching device operative to electrically interconnect a positive terminal of a first power source to a selected one of a positive and negative terminal of a second power source and a negative terminal of said first power source to another one of the positive and negative terminals of said second power source thereby to define a selected coupled state for the first and second power sources, comprising:

(a) a switch including a first pair of contacts, a second pair of contacts and a third pair of contacts, said switch movable between a first state wherein each of said third pair of contacts is placed in electrical communication with a respective one of said second pair of contacts and a second state wherein each of said third pair of contacts is placed in electrical communication with a respective one of said second pair of contacts;

(b) a first pair of electrical leads having first ends each respectively connected to a selected one of said first pair of contacts and to a selected one of said second pair of contacts in a configuration such that electrical communication between each of said third electrical contacts and said first pair of electrical leads is reversed when said switch moves from said first state to said second state, said first pair of electrical leads having second ends adapted to connect respectively to the positive and negative terminals of one of said first and second power sources;

(c) a second pair of electrical leads having first ends each respectively connected to a selected one of said third contacts and second ends adapted to connect respectively to the positive and negative terminals of another of said first and second power sources; and

(d) a switch controller including a plurality of current-carrying coils in electrical communication with said first and second pairs of electrical leads and an actuator coupled to said switch, said current carrying coils operative

upon connection of the second ends of said first and second pairs of leads to said first and second power sources to produce a composite magnetic field, said coils arranged such that said actuator interacts with said composite magnetic field to automatically move said switch into whichever one of said first and second states that interconnects said first and second power sources in the selected coupled state regardless of the respective connections of the second ends of said first and second pairs of leads to the positive and negative terminals of said first and second power sources.

2. An electromechanical switching device according to claim 1 wherein said switch is a double pole double throw switch.

3. An electromechanical switching device according to claim 1 wherein said switch controller includes an inner coil interposed between a pair of outer coils, said inner and outer coils movable with respect to one another as a result of magnetic interaction therebetween when current flows therethrough, said actuator secured to one of the inner and outer coils for common movement therewith.

4. An electromechanical switching device according to claim 1 wherein said switch controller includes an inner coil interposed and movable between fixed first and second outer coils, said actuator secured to said inner coil for common movement therewith.

5. An electromechanical switching device according to claim 4 wherein said first and second coils are spiral wound in opposite directions with respect to a common coil axis and are electrically interconnected so that, when current is passed therethrough, said first and second coils respectively produce magnetic fields having a common polarity opposed to one another.

6. An electromechanical switching device adapted for use with a pair of power sources each including a positive terminal and a negative terminal, said electromechanical switching device operative to establish electrical

communication between like terminals of the power sources, comprising:

(a) a plurality of current-carrying coils each adapted to electrically connect in a selected connection state to the oppositely polarized terminals associated with a respective one of said power sources to produce an associated magnetic field so that a composite magnetic field is established; and

(b) a switch magnetically coupled to said coils and operative when said coils are connected to the power sources to interact with the composite magnetic field thereby to interconnect the like terminals of the power sources irrespective of the selected connection state of said coils.

7. An electromechanical switching device according to claim 6 wherein said switch includes an actuator and a plurality of switch contacts.

8. An electromechanical switching device according to claim 6 wherein said electromechanical switching device consists of three said coils.

9. An electromechanical switching device according to claim 8 wherein said coils are positioned about and are aligned along a longitudinally extending coil axis.

10. An electromechanical switching device according to claim 9 including a pair of longitudinally spaced apart outer coils and an inner coil interposed therebetween in spaced relation from each of said outer coils.

11. An electromechanical switching device according to claim 10 wherein each of said coils includes a spool and a spiral winding of wire supported thereon.

12. An electromechanical switching device according to claim 10 wherein said outer coils are wound in opposite directions.

13. An electromechanical switching device according to claim 10 wherein said outer coils are wound with a common piece of wire.

14. An electromechanical switching device according to claim 7 wherein said coils are aligned along a longitudinally

extending coil axis, said actuator extending through said coils along the coil axis and operative to move longitudinally therealong when said switch interacts with the composite magnetic field.

15. A method of ensuring desired electrical interconnection automatically between a pair of power sources, wherein each of said power sources includes a positive terminal and a negative terminal, comprising the steps of:

(a) producing a first magnetic field associated with a first one of said power sources;

(b) producing a pair of second magnetic fields associated with a second one of said power sources; and

(c) actuating a switch in response to interaction between said first magnetic field and second magnetic fields thereby to establish electrical interconnection between the desired terminals of said power sources.

16. The method according to claim 15 wherein the step of producing said first magnetic field is accomplished by electrically interconnecting the positive terminal and the negative terminal associated with a first one of said power sources to a first current-carrying coil, and wherein the step of producing said second magnetic fields is accomplished by electrically interconnecting the oppositely polarized terminals associated with a second one of said power sources to a pair of second current-carrying coils in a manner such that the second magnetic fields are oriented oppositely with respect to one another.